

=====

Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: Tue Aug 28 14:32:26 EDT 2007

=====

Application No: 10568414 Version No: 2.1

Input Set:

Output Set:

Started: 2007-08-28 14:31:20.508
Finished: 2007-08-28 14:31:21.124
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 616 ms
Total Warnings: 0
Total Errors: 0
No. of SeqIDs Defined: 2
Actual SeqID Count: 2

SEQUENCE LISTING

<110> Aasly, Jan O
 Wszolek, Zbigniew K
 Farrer, Matthew J

<120> Polynucleotide

<130> U1913

<140> 10/568,414

<141> 2006-02-14

<150> NO20045612

<151> 2004-12-23

<160> 2

<170> PatentIn version 3.1

<210> 1

<211> 2527

<212> PRT

<213> Homo sapiens

<220>

<221> MISC_FEATURE

<222> (2019)..(2019)

<223> X may be any amino acid except glycine.

<300>

<308> Genbank / AY792511

<309> 2004-11-15

<313> (1)..(2527)

<400> 1

Met Ala Ser Gly Ser Cys Gln Gly Cys Glu Glu Asp Glu Glu Thr Leu
 1 5 10 15

Lys Lys Leu Ile Val Arg Leu Asn Asn Val Gln Glu Gly Lys Gln Ile
 20 25 30

Glu Thr Leu Val Gln Ile Leu Glu Asp Leu Leu Val Phe Thr Tyr Ser
 35 40 45

Glu His Ala Ser Lys Leu Phe Gln Gly Lys Asn Ile His Val Pro Leu
 50 55 60

Leu Ile Val Leu Asp Ser Tyr Met Arg Val Ala Ser Val Gln Gln Val
 65 70 75 80

Gly	Trp	Ser	Leu	Leu	Cys	Lys	Leu	Ile	Glu	Val	Cys	Pro	Gly	Thr	Met	85	90	95	
Gln	Ser	Leu	Met	Gly	Pro	Gln	Asp	Val	Gly	Asn	Asp	Trp	Glu	Val	Leu	100	105	110	
Gly	Val	His	Gln	Leu	Ile	Leu	Lys	Met	Leu	Thr	Val	His	Asn	Ala	Ser	115	120	125	
Val	Asn	Leu	Ser	Val	Ile	Gly	Leu	Lys	Thr	Leu	Asp	Leu	Leu	Leu	Thr	130	135	140	
Ser	Gly	Lys	Ile	Thr	Leu	Leu	Ile	Leu	Asp	Glu	Glu	Ser	Asp	Ile	Phe	145	150	155	160
Met	Leu	Ile	Phe	Asp	Ala	Met	His	Ser	Phe	Pro	Ala	Asn	Asp	Glu	Val	165	170	175	
Gln	Lys	Leu	Gly	Cys	Lys	Ala	Leu	His	Val	Leu	Phe	Glu	Arg	Val	Ser	180	185	190	
Glu	Glu	Gln	Leu	Thr	Glu	Phe	Val	Glu	Asn	Lys	Asp	Tyr	Met	Ile	Leu	195	200	205	
Leu	Ser	Ala	Ser	Thr	Asn	Phe	Lys	Asp	Glu	Glu	Glu	Ile	Val	Leu	His	210	215	220	
Val	Leu	His	Cys	Leu	His	Ser	Leu	Ala	Ile	Pro	Cys	Asn	Asn	Val	Glu	225	230	235	240
Val	Leu	Met	Ser	Gly	Asn	Val	Arg	Cys	Tyr	Asn	Ile	Val	Val	Glu	Ala	245	250	255	
Met	Lys	Ala	Phe	Pro	Met	Ser	Glu	Arg	Ile	Gln	Glu	Val	Ser	Cys	Cys	260	265	270	
Leu	Leu	His	Arg	Leu	Thr	Leu	Gly	Asn	Phe	Phe	Asn	Ile	Leu	Val	Leu	275	280	285	
Asn	Glu	Val	His	Glu	Phe	Val	Val	Lys	Ala	Val	Gln	Gln	Tyr	Pro	Glu	290	295	300	

Asn Ala Ala Leu Gln Ile Ser Ala Leu Ser Cys Leu Ala Leu Leu Thr
305 310 315 320

Glu Thr Ile Phe Leu Asn Gln Asp Leu Glu Glu Lys Asn Glu Asn Gln
325 330 335

Glu Asn Asp Asp Glu Gly Glu Glu Asp Lys Leu Phe Trp Leu Glu Ala
340 345 350

Cys Tyr Lys Ala Leu Thr Trp His Arg Lys Asn Lys His Val Gln Glu
355 360 365

Ala Ala Cys Trp Ala Leu Asn Asn Leu Leu Met Tyr Gln Asn Ser Leu
370 375 380

His Glu Lys Ile Gly Asp Glu Asp Gly His Phe Pro Ala His Arg Glu
385 390 395 400

Val Met Leu Ser Met Leu Met His Ser Ser Ser Lys Glu Val Phe Gln
405 410 415

Ala Ser Ala Asn Ala Leu Ser Thr Leu Leu Glu Gln Asn Val Asn Phe
420 425 430

Arg Lys Ile Leu Leu Ser Lys Gly Ile His Leu Asn Val Leu Glu Leu
435 440 445

Met Gln Lys His Ile His Ser Pro Glu Val Ala Glu Ser Gly Cys Lys
450 455 460

Met Leu Asn His Leu Phe Glu Gly Ser Asn Thr Ser Leu Asp Ile Met
465 470 475 480

Ala Ala Val Val Pro Lys Ile Leu Thr Val Met Lys Arg His Glu Thr
485 490 495

Ser Leu Pro Val Gln Leu Glu Ala Leu Arg Ala Ile Leu His Phe Ile
500 505 510

Val Pro Gly Met Pro Glu Glu Ser Arg Glu Asp Thr Glu Phe His His
515 520 525

Lys Leu Asn Met Val Lys Lys Gln Cys Phe Lys Asn Asp Ile His Lys

530

535

540

Leu Val Leu Ala Ala Leu Asn Arg Phe Ile Gly Asn Pro Gly Ile Gln
545 550 555 560

Lys Cys Gly Leu Lys Val Ile Ser Ser Ile Val His Phe Pro Asp Ala
565 570 575

Leu Glu Met Leu Ser Leu Glu Gly Ala Met Asp Ser Val Leu His Thr
580 585 590

Leu Gln Met Tyr Pro Asp Asp Gln Glu Ile Gln Cys Leu Gly Leu Ser
595 600 605

Leu Ile Gly Tyr Leu Ile Thr Lys Lys Asn Val Phe Ile Gly Thr Gly
610 615 620

His Leu Leu Ala Lys Ile Leu Val Ser Ser Leu Tyr Arg Phe Lys Asp
625 630 635 640

Val Ala Glu Ile Gln Thr Lys Gly Phe Gln Thr Ile Leu Ala Ile Leu
645 650 655

Lys Leu Ser Ala Ser Phe Ser Lys Leu Leu Val His His Ser Phe Asp
660 665 670

Leu Val Ile Phe His Gln Met Ser Ser Asn Ile Met Glu Gln Lys Asp
675 680 685

Gln Gln Phe Leu Asn Leu Cys Cys Lys Cys Phe Ala Lys Val Ala Met
690 695 700

Asp Asp Tyr Leu Lys Asn Val Met Leu Glu Arg Ala Cys Asp Gln Asn
705 710 715 720

Asn Ser Ile Met Val Glu Cys Leu Leu Leu Leu Gly Ala Asp Ala Asn
725 730 735

Gln Ala Lys Glu Gly Ser Ser Leu Ile Cys Gln Val Cys Glu Lys Glu
740 745 750

Ser Ser Pro Lys Leu Val Glu Leu Leu Leu Asn Ser Gly Ser Arg Glu
755 760 765

Gln Asp Val Arg Lys Ala Leu Thr Ile Ser Ile Gly Lys Gly Asp Ser
770 775 780

Gln Ile Ile Ser Leu Leu Leu Arg Arg Leu Ala Leu Asp Val Ala Asn
785 790 795 800

Asn Ser Ile Cys Leu Gly Gly Phe Cys Ile Gly Lys Val Glu Pro Ser
805 810 815

Trp Leu Gly Pro Leu Phe Pro Asp Lys Thr Ser Asn Leu Arg Lys Gln
820 825 830

Thr Asn Ile Ala Ser Thr Leu Ala Arg Met Val Ile Arg Tyr Gln Met
835 840 845

Lys Ser Ala Val Glu Glu Gly Thr Ala Ser Gly Ser Asp Gly Asn Phe
850 855 860

Ser Glu Asp Val Leu Ser Lys Phe Asp Glu Trp Thr Phe Ile Pro Asp
865 870 875 880

Ser Ser Met Asp Ser Val Phe Ala Gln Ser Asp Asp Leu Asp Ser Glu
885 890 895

Gly Ser Glu Gly Ser Phe Leu Val Lys Lys Lys Ser Asn Ser Ile Ser
900 905 910

Val Gly Glu Phe Tyr Arg Asp Ala Val Leu Gln Arg Cys Ser Pro Asn
915 920 925

Leu Gln Arg His Ser Asn Ser Leu Gly Pro Ile Phe Asp His Glu Asp
930 935 940

Leu Leu Lys Arg Lys Arg Lys Ile Leu Ser Ser Asp Asp Ser Leu Arg
945 950 955 960

Ser Ser Lys Leu Gln Ser His Met Arg His Ser Asp Ser Ile Ser Ser
965 970 975

Leu Ala Ser Glu Arg Glu Tyr Ile Thr Ser Leu Asp Leu Ser Ala Asn
980 985 990

Glu Leu Arg Asp Ile Asp Ala Leu	Ser Gln Lys Cys Cys	Ile Ser Val
995	1000	1005
His Leu Glu His Leu Glu Lys	Leu Glu Leu His Gln	Asn Ala Leu
1010	1015	1020
Thr Ser Phe Pro Gln Gln Leu	Cys Glu Thr Leu Lys	Ser Leu Thr
1025	1030	1035
His Leu Asp Leu His Ser Asn	Lys Phe Thr Ser Phe	Pro Ser Tyr
1040	1045	1050
Leu Leu Lys Met Ser Cys Ile	Ala Asn Leu Asp Val	Ser Arg Asn
1055	1060	1065
Asp Ile Gly Pro Ser Val Val	Leu Asp Pro Thr Val	Lys Cys Pro
1070	1075	1080
Thr Leu Lys Gln Phe Asn Leu	Ser Tyr Asn Gln Leu	Ser Phe Val
1085	1090	1095
Pro Glu Asn Leu Thr Asp Val	Val Glu Lys Leu Glu	Gln Leu Ile
1100	1105	1110
Leu Glu Gly Asn Lys Ile Ser	Gly Ile Cys Ser Pro	Leu Arg Leu
1115	1120	1125
Lys Glu Leu Lys Ile Leu Asn	Leu Ser Lys Asn His	Ile Ser Ser
1130	1135	1140
Leu Ser Glu Asn Phe Leu Glu	Ala Cys Pro Lys Val	Glu Ser Phe
1145	1150	1155
Ser Ala Arg Met Asn Phe Leu	Ala Ala Met Pro Phe	Leu Pro Pro
1160	1165	1170
Ser Met Thr Ile Leu Lys Leu	Ser Gln Asn Lys Phe	Ser Cys Ile
1175	1180	1185
Pro Glu Ala Ile Leu Asn Leu	Pro His Leu Arg Ser	Leu Asp Met
1190	1195	1200

Ser Ser Asn Asp Ile Gln Tyr Leu Pro Gly Pro Ala His Trp Lys
1205 1210 1215

Ser Leu Asn Leu Arg Glu Leu Leu Phe Ser His Asn Gln Ile Ser
1220 1225 1230

Ile Leu Asp Leu Ser Glu Lys Ala Tyr Leu Trp Ser Arg Val Glu
1235 1240 1245

Lys Leu His Leu Ser His Asn Lys Leu Lys Glu Ile Pro Pro Glu
1250 1255 1260

Ile Gly Cys Leu Glu Asn Leu Thr Ser Leu Asp Val Ser Tyr Asn
1265 1270 1275

Leu Glu Leu Arg Ser Phe Pro Asn Glu Met Gly Lys Leu Ser Lys
1280 1285 1290

Ile Trp Asp Leu Pro Leu Asp Glu Leu His Leu Asn Phe Asp Phe
1295 1300 1305

Lys His Ile Gly Cys Lys Ala Lys Asp Ile Ile Arg Phe Leu Gln
1310 1315 1320

Gln Arg Leu Lys Lys Ala Val Pro Tyr Asn Arg Met Lys Leu Met
1325 1330 1335

Ile Val Gly Asn Thr Gly Ser Gly Lys Thr Thr Leu Leu Gln Gln
1340 1345 1350

Leu Met Lys Thr Lys Lys Ser Asp Leu Gly Met Gln Ser Ala Thr
1355 1360 1365

Val Gly Ile Asp Val Lys Asp Trp Pro Ile Gln Ile Arg Asp Lys
1370 1375 1380

Arg Lys Arg Asp Leu Val Leu Asn Val Trp Asp Phe Ala Gly Arg
1385 1390 1395

Glu Glu Phe Tyr Ser Thr His Pro His Phe Met Thr Gln Arg Ala
1400 1405 1410

Leu Tyr Leu Ala Val Tyr Asp Leu Ser Lys Gly Gln Ala Glu Val

1415		1420		1425
Asp Ala Met Lys Pro Trp Leu Phe Asn Ile Lys Ala Arg Ala Ser				
1430		1435		1440
Ser Ser Pro Val Ile Leu Val Gly Thr His Leu Asp Val Ser Asp				
1445		1450		1455
Glu Lys Gln Arg Lys Ala Cys Met Ser Lys Ile Thr Lys Glu Leu				
1460		1465		1470
Leu Asn Lys Arg Gly Phe Pro Ala Ile Arg Asp Tyr His Phe Val				
1475		1480		1485
Asn Ala Thr Glu Glu Ser Asp Ala Leu Ala Lys Leu Arg Lys Thr				
1490		1495		1500
Ile Ile Asn Glu Ser Leu Asn Phe Lys Ile Arg Asp Gln Leu Val				
1505		1510		1515
Val Gly Gln Leu Ile Pro Asp Cys Tyr Val Glu Leu Glu Lys Ile				
1520		1525		1530
Ile Leu Ser Glu Arg Lys Asn Val Pro Ile Glu Phe Pro Val Ile				
1535		1540		1545
Asp Arg Lys Arg Leu Leu Gln Leu Val Arg Glu Asn Gln Leu Gln				
1550		1555		1560
Leu Asp Glu Asn Glu Leu Pro His Ala Val His Phe Leu Asn Glu				
1565		1570		1575
Ser Gly Val Leu Leu His Phe Gln Asp Pro Ala Leu Gln Leu Ser				
1580		1585		1590
Asp Leu Tyr Phe Val Glu Pro Lys Trp Leu Cys Lys Ile Met Ala				
1595		1600		1605
Gln Ile Leu Thr Val Lys Val Glu Gly Cys Pro Lys His Pro Lys				
1610		1615		1620
Gly Ile Ile Ser Arg Arg Asp Val Glu Lys Phe Leu Ser Lys Lys				
1625		1630		1635

Arg Lys Phe Pro Lys Asn Tyr Met Ser Gln Tyr Phe Lys Leu Leu
1640 1645 1650

Glu Lys Phe Gln Ile Ala Leu Pro Ile Gly Glu Glu Tyr Leu Leu
1655 1660 1665

Val Pro Ser Ser Leu Ser Asp His Arg Pro Val Ile Glu Leu Pro
1670 1675 1680

His Cys Glu Asn Ser Glu Ile Ile Ile Arg Leu Tyr Glu Met Pro
1685 1690 1695

Tyr Phe Pro Met Gly Phe Trp Ser Arg Leu Ile Asn Arg Leu Leu
1700 1705 1710

Glu Ile Ser Pro Tyr Met Leu Ser Gly Arg Glu Arg Ala Leu Arg
1715 1720 1725

Pro Asn Arg Met Tyr Trp Arg Gln Gly Ile Tyr Leu Asn Trp Ser
1730 1735 1740

Pro Glu Ala Tyr Cys Leu Val Gly Ser Glu Val Leu Asp Asn His
1745 1750 1755

Pro Glu Ser Phe Leu Lys Ile Thr Val Pro Ser Cys Arg Lys Gly
1760 1765 1770

Cys Ile Leu Leu Gly Gln Val Val Asp His Ile Asp Ser Leu Met
1775 1780 1785

Glu Glu Trp Phe Pro Gly Leu Leu Glu Ile Asp Ile Cys Gly Glu
1790 1795 1800

Gly Glu Thr Leu Leu Lys Lys Trp Ala Leu Tyr Ser Phe Asn Asp
1805 1810 1815

Gly Glu Glu His Gln Lys Ile Leu Leu Asp Asp Leu Met Lys Lys
1820 1825 1830

Ala Glu Glu Gly Asp Leu Leu Val Asn Pro Asp Gln Pro Arg Leu
1835 1840 1845

Thr Ile Pro Ile Ser Gln Ile Ala Pro Asp Leu Ile Leu Ala Asp
1850 1855 1860

Leu Pro Arg Asn Ile Met Leu Asn Asn Asp Glu Leu Glu Phe Glu
1865 1870 1875

Gln Ala Pro Glu Phe Leu Leu Gly Asp Gly Ser Phe Gly Ser Val
1880 1885 1890

Tyr Arg Ala Ala Tyr Glu Gly Glu Glu Val Ala Val Lys Ile Phe
1895 1900 1905

Asn Lys His Thr Ser Leu Arg Leu Leu Arg Gln Glu Leu Val Val
1910 1915 1920

Leu Cys His Leu His His Pro Ser Leu Ile Ser Leu Leu Ala Ala
1925 1930 1935

Gly Ile Arg Pro Arg Met Leu Val Met Glu Leu Ala Ser Lys Gly
1940 1945 1950

Ser Leu Asp Arg Leu Leu Gln Gln Asp Lys Ala Ser Leu Thr Arg
1955 1960 1965

Thr Leu Gln